

REMARKS

The undersigned wishes to thank the Examiner and her supervisor for the courtesies extended during the Examiner's Interview conducted at the U.S. Patent and Trademark Office on April 5, 2002, wherein the Examiners agreed that the following amendments and remarks appear to overcome the rejections of record.

Claim 1 was amended to correct a typographical error by replacing "dispensing" with --dispersing--. Support for this amendment is found in the specification at, for example, page 2, line 26.

Claims 1, 9, and 11 have been amended to recite that the phytantriol is "dissolved in" the dispersing agent and hair dye. Support for these amendments is found in the specification at, for example page 4, lines 28-31 and in Example 1, especially at page 5, line 27.

Claims 1, 9, and 11 have also been amended, solely for purposes of clarity, to recite that the hair dye composition consists essentially of a "color molecule." Support for this amendment is found in the specification, at for example, page 4, lines 8-15, and Example 3 (especially the table spanning pp. 6-7), and original claim 8. See, *In re Gardner*, 177 USPQ 396, 397 (CCPA 1973) and MPEP §§ 608.01(o) and (l).

Claims 4 and 8 have been amended to replace the recited trademarks/tradenames with the corresponding chemical name and to cancel ARIANOR Ebony. Support for the amendment to claim 4 is found in the specification, at for example, page 3, line 22. The anthraquinone dyes identified by their tradenames in claim 8 are well known. Attached hereto as exhibit 2 is a copy of U.S. Patent Nos.

4,964,874 (e.g., Col. 3, lines 1-40) and 6,228,129 (e.g., Col. 8, lines 22-39), which specifically identify the chemical names of each of the tradenames recited in amended claim 8.

It is submitted that no new matter has been introduced by the foregoing amendments. Approval and entry of the amendments respectfully is requested.

§112, Second Paragraph Rejections

Claims 4 and 8 have been rejected under 35 U.S.C. §112, second paragraph. (Paper No. 3 at 2). In making the rejection, the Examiner asserted that claims 4 and 8 contain the trademark/tradename TWEEN and ARIANOR, respectively. (*Id.*).

With a view toward furthering prosecution and in view of the Examiner's comments at the Interview, claims 4 and 8 have been amended to identify the chemical name designated by each trademark/tradename. Accordingly, the rejections of claims 4 and 8 have been rendered moot, and should be withdrawn.

§103(a) Rejections

A. Ribier in view of Krutak

Claims 1-8, 11, and 12 have been rejected as unpatentable under 35 U.S.C. §103(a) over Ribier *et al.*, U.S. Patent No. 5,834,013 ("Ribier") in view of Krutak *et al.*, U.S. Patent No. 5,951,718 ("Krutak"). (Paper No. 3 at 3).

For the reasons set forth below, this rejection is traversed.

Ribier discloses "a cosmetic or dermatological composition for topical use in the form of an aqueous and stable dispersion of **cubic gel particles** based on 3,7,11,15-tetramethyl-1,2,3-hexadecanetriol or phytanetriol and containing a water-soluble surface active agent" (Col. 1, lines 10-15). Ribier discloses that "it was possible to obtain stable cosmetic or dermatological compositions containing **cubic gel particles in dispersed form**, which have both hydrophilic and lipophilic domains enabling hydrophilic and lipophilic **active principles to be included therein**, these particles having a **reduced and controllable lattice** which makes it possible to **modulate the availability of the active** principles sequestered. These compositions thus constitute **an ideal support for active principles** of opposite and incompatible polarity or of complementary or even synergistic activity." (Col. 2, lines 11-20).

Among the active principles that may be incorporated into the cubic gel particles, Ribier discloses natural dyes (Col. 6, lines 7-11) and hair dyes (Col. 6, lines 51-54). To make the cubic gel particles, special process steps are disclosed including homogenizing a mixture of phytanetriol, water and Polysorbate 40 to form a dispersion of the cubic gel particles. (See Example 1, Col. 7, lines 31-39).

Krutak discloses compositions and processes for non-permanently coloring keratinous fibers using sulfo-containing, water-dispersible, "**colored polymers** wherein the colorant moiety is incorporated into or onto a carbonyloxy and/or carbonylamide backbone of the polymer." (Col. 1, lines 14-16). Krutak discloses that "[t]he polymers are **uniquely designed** to offer cosmetically desirable color coating on hair and to be easily dispersible in hot water, yet offer excellent resistance to redispersion in water at room temperature." (*Id.* at lines 16-21).

Krutak discloses that the structure of the colorant compounds may be represented as:



where Col is the residue of a colorant and X is a condensable carbonyloxy-reactive or carbonylamide-reactive substituent. (Col. 7, lines 8-13). Krutak also discloses that anthraquinones are one of the "preferred" classes of colorants. (*Id.* at line 6).

In making the rejection, the Examiner asserted that Ribier disclose a cosmetic or dermatological composition containing phytantriol and a dispersing agent. (Paper No. 3 at 3). The Examiner acknowledged, however, that Ribier does not disclose the use of anthraquinone dyes or the instant amount of hair dye. (*Id.*). To fill this acknowledged gap, the Examiner relied on Krutak as disclosing the use of "anthraquinone dyes and the several colors that it imparts on the hair and the instant amount." (*Id.*). The Examiner concluded that "it would have been obvious ... to combine the teachings of Ribier *et al.* and Krutak *et al.* since Ribier *et al.* disclose the use of semi-permanent dyes and Krutak *et al.* disclose that an anthraquinone dye is a semi-permanent dye known in the art." (*Id.*).

Initially, we note that the Examiner bears the burden to come forth with a *prima facie* case of unpatentability. (*In re Glaug*, 62 USPQ2d 1151, 1152 (Fed. Cir. 2002); *In re Oetiker*, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); and *In re Piasecki*, 223 USPQ 785, 788 (Fed. Cir. 1984)). If the PTO fails to meet its burden, then the applicant is entitled to a patent. (*In re Glaug*, 62 USPQ2d at 1152.).

When patentability turns on the question of obviousness, as here, the search for and analysis of the prior art by the PTO must include evidence relevant to

the finding of whether there is a teaching, motivation, or suggestion to select and combine the documents relied on by the Examiner as evidence of obviousness. *McGinley v. Franklin Sports*, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001). The factual inquiry whether to combine documents must be thorough and searching. And, as is well settled, the teaching, motivation, or suggestion to combine “***must be based on objective evidence of record.***” *In re Lee*, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

Here, the rejection relies on a single sentence for its evidence of motivation to combine Ribier with Krutak: “One would be motivated to do so [combine Ribier with Krutak] since Krutak *et al.* teach the instantly claimed colors and disclose that anthraquinone’s low glass transition temperature that makes the composition resistant to color bleed (example 36).” (Paper No. 3 at 3).

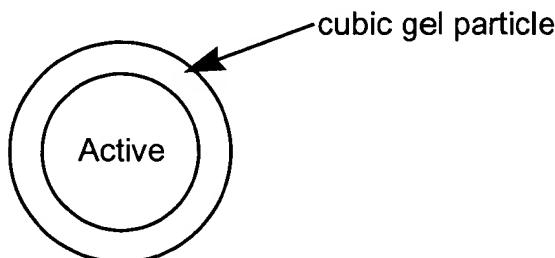
The rejection, however, fails to identify *why* one skilled in this art would select Ribier as a starting point for making a hair dye composition as claimed. Ribier, when considered as a whole, discloses cosmetic or dermatological compositions and methods for making such compositions containing specifically designed delivery vehicles - “***dispersed cubic particles***” of phytantriol - as “supports” for various active agents. (Col. 2, lines 10-20). The rejection identifies no disclosure or technical reasoning why one skilled in this art would look to Ribier as a starting point for making a hair colorant composition as claimed wherein the phytantriol is ***dissolved in a dispersing agent and a hair dye.***

Moreover, Krutak, as a whole, discloses forming “colored polymers” (i.e., covalently bonding a color agent to a polymer backbone), which colored polymer - not the dye alone - may be easily removed from the hair. (Col. 5, lines 1-7). The rejection

does not identify any disclosure or suggestion in Ribier of using a polymer-bound dye ("colored polymer") or in Krutak of using a delivery system containing "dispersed cubic particles" of phytantriol. Nor does the rejection explain why one would look to a document disclosing how to make and use "colored polymers" that coat hair and are easily removed by washing (Krutak) if one was looking for dyes to use in the Ribier system of dispersed cubic particles of phytantriol.

At most, the rejection relies on Example 36 of Krutak for the required motivation to combine Ribier and Krutak. But, Example 36, just like the rest of Krutak, is directed to "polymer-bound dye compositions," specifically a Magenta Anthraquinone "**aqueous colored polymer solution.**" (Col. 19, lines 22-23). Thus, the rejection does not identify where, in either of the cited documents of record, there is a motivation to combine Ribier with Krutak in the manner suggested. For this reason alone the rejection should be withdrawn.

Even if Ribier is properly combinable with Krutak, which is not admitted, we note that Ribier discloses dispersions of "**cubic gel particles**" of phytanetriol as depicted below. (See e.g., Col. 1, lines 10-15 and lines 52-53).



Amended claims 1 and 11, however, recite that the phytantriol is "**dissolved in**" the dispensing agent and hair dye.

The rejection identifies no disclosure in Ribier that the cubic gel particles of phytantriol disclosed therein in any way teach, motivate or suggest the particular form of phytantriol (dissolved) recited in claims 1 and 11. And, the rejection identifies nothing in Krutak that would remedy this additional gap. For this reason also the rejection should be withdrawn.

We also note that Krutak does not disclose that anthraquinone *per se* is a semi-permanent dye. Rather, Krutak discloses that incorporating an anthraquinone into a carbonyloxy and/or carbonylamide backbone of a polymer produces a "colored polymer" (X-Col-X) that may be used for non-permanently coloring keratinous fibers. (See Col. 7, lines 5-13). Combining Ribier and Krutak in the manner suggested in the rejection would not lead to amended claims 1 and 11 wherein a "hair dye composition consisting essentially of a color molecule" is recited. Thus, the rejection fails to identify where in Ribier or Krutak using a hair dye as recited in claims 1 and 11, *i.e.*, a hair dye that is not bound to a carbonyloxy or carbonylamide polymer is suggested or disclosed. For this reason too the rejection should be withdrawn.

B. Ribier in view of Wenke

Claims 9 and 10 have been rejected as unpatentable under 35 U.S.C. §103(a) over Ribier in view of Wenke *et al.*, U.S. Patent No. 5,628,799 ("Wenke"). (Paper No. 3 at 3).

For the reasons set forth below, this rejection is traversed.

Ribier is summarized above. Wenke discloses a process for dying hair using dopa (dihydroxyphenylalanine) and/or substituted dopa compounds to generate

melanin pigments for use as a permanent hair dye. (Col. 1, lines 16-19). Wenke discloses that an effective melanin-forming hair dyeing amount of 5,6-dihydroxyindole is generated during the reaction of dopa with an oxidant. (Col. 2, lines 29-34). Wenke discloses that in order to achieve the permanent dyeing of hair, "it is *critical* to generate melanin from the melanin-forming hair dye precursor" (Col. 3, lines 6-10).

Wenke discloses that the process works through "a series of reactions leading to the formation of one or more melanin precursors capable of diffusing into the hair shaft. Within the hair shaft, the precursor is oxidized by air to melanin, which is incapable of diffusion out of the hair shaft." (Col. 5, lines 10-14).

Wenke discloses that "the color obtained by oxidation of the dopa species can be significantly modified by including direct dyes and, if desired primary intermediates, and/or couplers in the reaction medium." (Col. 4, line 66 - Col. 5, line 2). Wenke also discloses hair dyeing kit products, wherein the kit includes "a first container containing a dopa species solution containing the direct dye or, optionally the primary intermediate and/or coupler, and a second container containing the oxidant solution." (Col. 12, lines 12-17).

In making the rejection, the Examiner asserted that Ribier disclose a cosmetic or dermatological composition containing phytantriol in a dispersing agent and a composition containing an active agent such as a permanent hair dye with an oxidation coupler and base. (Paper No. 3 at 4). The Examiner acknowledged, however, that Ribier "do not teach a specific hair dye kit where the primary reactor (oxidizing agent) and secondary reactor (coupler) are in separate packs." (*Id.*). To fill this acknowledged gap, the Examiner relied on Wenke as disclosing "a hair dye kit in

which the oxidizing agent and a coupler are pre-measured in different containers and mixed together by the user." (*Id.*).

As noted above in the Ribier-Krutak rejection, the Examiner bears the burden to set forth a *prima facie* case of unpatentability. (*In re Glaug*, 62 USPQ2d at 1152; *In re Oetiker*, 24 USPQ2d at 1444; and *In re Piasecki*, 223 USPQ at 788). When, as here, the rejection is based on a combination of documents, the Examiner must identify where in the record there is a disclosure, teaching or suggestion to combine the documents in the manner set forth in the rejection. Again, the rejection dispenses with this requirement with a single sentence: "One would be motivated to do so [combine Ribier with Wenke] since a desirable hair color product would be yielded where the phytantriol would provide for a hydrating color and the premeasured kit would allow for correct mixing/use by the consumer." (Paper No. 3 at 4).

Notwithstanding the content of this one sentence, we respectfully submit that one sentence does not meet the "thorough and searching" standard required by the Federal Circuit of the factual inquiry into whether there is a sufficient motivation to combine the documents. *In re Lee*, 61 USPQ2d at 1433. Moreover, the only evidence of record cited in the rejection is to Wenke at Col. 12, lines 27-30 ("Moreover, solutions containing premeasured quantities of the constituents facilitates their correct use by the consumer.").

This one sentence in Wenke relied on by the rejection provides no evidence that the permanent hair coloring compositions/methods disclosed by Wenke would benefit by being combined with the phytantriol cubic gel particle delivery system of Ribier. Thus, the motivation, teaching or suggestion required by Federal Circuit

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precedent simply is absent from the rejection. Thus, because the rejection is not based on objective evidence of record, it cannot stand. For this reason alone, the rejection should be withdrawn.

With a view toward furthering prosecution, however, we note that claim 9 has been amended to clarify that the phytantriol is ***dissolved in*** the dispersing agent and is present in at least one of the first or second packs. As discussed above, the rejection identifies no disclosure or suggestion that the ***dispersed cubic gel particles*** of phytantriol in Ribier would lead one to the presently claimed form of phytantriol ***dissolved in*** the dispersing agent. And, the rejection identifies no disclosure in Wenke that would remedy this gap. Accordingly, even if Ribier and Wenke are properly combinable, which is not admitted, one would not be led to claims 9 and 10. For this reason also, the rejection should be withdrawn.

Accordingly, for the reasons set forth above, entry of the amendments, withdrawal of the rejections, and allowance of the claims is respectfully requested. If the Examiner has any questions regarding this paper, please contact the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231, on April 10, 2002.

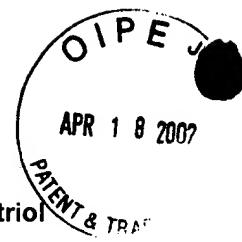
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Respectfully submitted,

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Applicant: M.R. Hickling
U.S. Serial No. 09/734,803
Filed: December 12, 2000
For: Hair Colorant Composition Containing Phytantriol



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"Marked Up" Amendments to Claims Pursuant to Rule 1.121(c)

1. (Amended) A hair colorant composition comprising from about 0.1 to about 5% by weight of phytantriol dissolved in [, from] about 0.1% to about 3% by weight of a dispersing [dispensing] agent, and from about 0.1 to about 5% by weight of a hair dye composition consisting essentially of a color molecule.

4. (Amended) A composition according to claim 3 wherein the dispersing agent is Polysorbate 20 [TWEEN 20].

8. (Amended) A hair colorant composition according to claim 7 wherein the anthraquinone dye is selected from the group consisting of 3-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)azo]-N,N,N-trimethylbenzenaminium chloride [ARIANOR Straw Yellow,] [8-[(p-aminophenyl)azo]-7-hydroxy-2-naphthyl]trimethylammonium chloride, [ARIANOR Mahogany,] 3-[(4-amino-6-bromo-5,8-dihydro-1-hydroxy-8-imino-5-oxo-2-naphthalenyl) amino]-N,N,N-trimethylbenzenaminium chloride, [ARIANOR Steel Blue], 7-hydroxy-8-[(2-methoxyphenyl)azo]-N,N,N-trimethyl-2-naphthalenaminium chloride, [ARIANOR Madder Red, ARIANOR Ebony], and [8[(4-amino-2-nitrophenyl)azo]-7-hydroxy-2-naphthyl]trimethylammonium chloride [ARIANOR Sienna Brown].

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9. (Amended) A kit for coloring hair comprising:

(a) a first pack comprising a primary intermediate;

(b) a second pack comprising a secondary intermediate, together the first and second packs provide from about 0.1 to about 1% of a hair dye composition consisting essentially of a color molecule, wherein a composition comprising from about 0.1 to about 5% by weight of a phytantriol dissolved in [and from] about 0.1 to about 3% by weight of a dispersing agent, is present in at least one of the first and second packs; and

(c) a container for housing the first and second packs.

11. (Amended) A method for improving the wash fastness of dyed hair comprising:

(a) applying to the hair a composition comprising from about 0.1 to about 5% by weight of phytantriol dissolved in [, from] about 0.1 to about 3% by weight of a dispersing agent, and from about 0.1 to about 5% by weight of a hair dye composition consisting essentially of a color molecule.